

INDEX OF PLANS

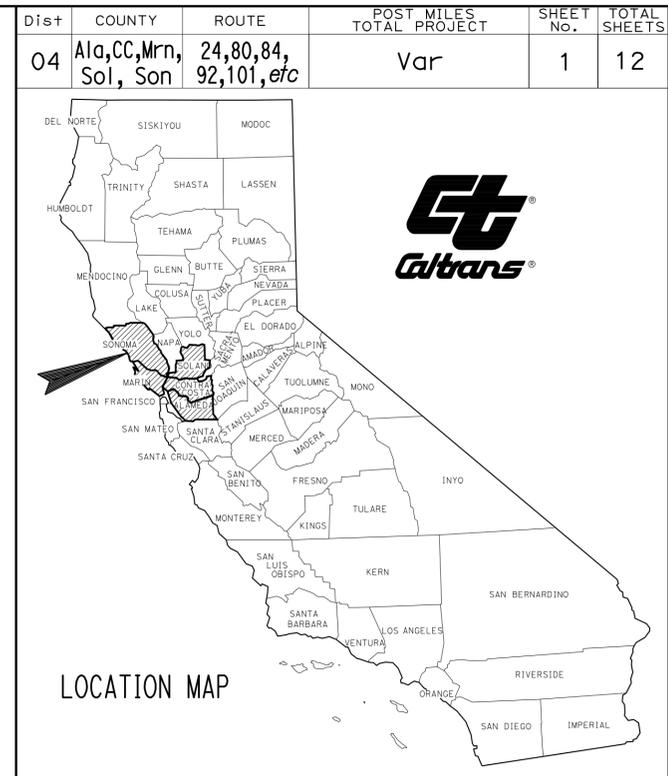
SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2-6	MODIFY TRAFFIC OPERATION SYSTEM
7-12	REVISED STANDARD PLANS

THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

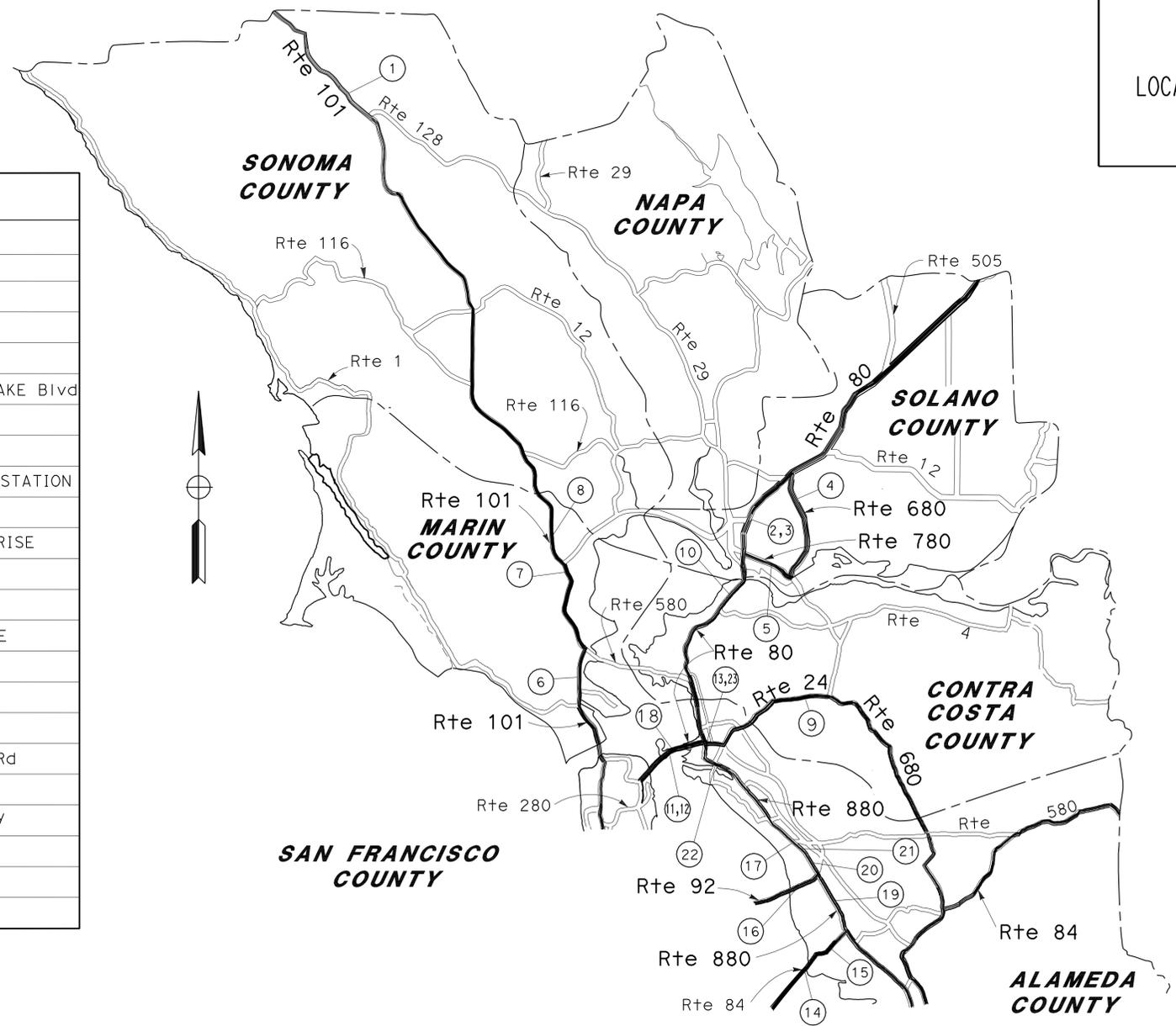
**IN ALAMEDA, CONTRA COSTA, MARIN,
 SOLANO AND SONOMA COUNTIES**
AT VARIOUS LOCATIONS

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



LOCATIONS OF CONSTRUCTION

Loc No.	Co	Rte	Dir	PM	DESCRIPTION
1	Son	101	NB	50.3	SOUTH CLOVERDALE Blvd
2	Sol	80	WB	4.2	SOUTH OF REDWOOD Pkwy
3	Sol	80	EB	4.2	SOUTH OF REDWOOD Pkwy
4	Sol	680	NB	10.2	NORTH OF GOLDHILL Rd
5	Sol	780	EB	1.5	EAST OF E 5th St
6	Mrn	101	NB	7.6	SOUTH OF SIR FRANCIS DRAKE Blvd
7	Mrn	101	NB	16.9	NORTH OF PACHECO CREEK
8	Mrn	101	SB	R20.7	SOUTH OF DELONG Ave
9	CC	24	WB	6.0	WEST OF LAFAYETTE BART STATION
10	CC	80	EB	11.2	EAST OF WILLOW Ave
11	Ala	80	WB	1.9	BEFORE BAY BRIDGE HIGH RISE
12	Ala	80	EB	1.9	WEST OF TOLL PLAZA
14	Ala	84	SB	R1.7	EAST OF DUMBARTON BRIDGE
15	Ala	84	NB	R4.0	EAST OF THORNTON Ave
16	Ala	92	EB	R5.4	EAST OF INDUSTRIAL Blvd
17	Ala	238	NB	15.7	NORTH OF ASHLAND Ave
18	Ala	880	SB	1.0	NORTH OF DIXON LANDING Rd
19	Ala	880	SB	12.2	NORTH OF ALVARADO Blvd
20	Ala	880	NB	14.8	NORTH OF INDUSTRIAL Pkwy
21	Ala	880	NB	19.2	NORTH OF WEST St
22	Ala	880	NB	R32.0	AT 5th St
23	Ala	880	NB	R34.6	AT WEST GRAND Ave



NO SCALE

PROJECT MANAGER
RAMSES SARGISS

DESIGN ENGINEER
KEITH YONG

Yong Choo F. 3-04-10
 PROJECT ENGINEER DATE
 REGISTERED CIVIL ENGINEER

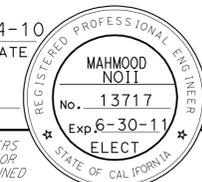


April 5, 2010
 PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

CONTRACT No. **04-1E6504**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala,CC,Mrn, Sol,Son	24,80,84, 92,101, etc	Var	2	12
			03-04-10		
REGISTERED ELECTRICAL ENGINEER			DATE		
4-5-10			PLANS APPROVAL DATE		
					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

PROJECT NOTES:

1. **RC** EXISTING CMS XENON PIXEL MATRIX MODULES. INSTALL LED PIXEL MATRIX MODULES. SEE E-5 FOR DETAILS.
2. THE CONTRACTOR SHALL FURNISH AND INSTALL ONE RACKMOUNT SURGE POWER STRIP WITH A SWITCH IN EACH MODEL 334 CONTROLLER CABINET. THE POWER STRIP SHALL BE PLUGGED INTO THE NON-GFCI DUPLEX OUTLET NORMALLY LABELED WITH "CONTROLLER UNIT Recp." IN THE BACK OF THE PDA UNIT. THE POWER STRIP SHALL BE MOUNTED AT THE TOP OF THE STANDARD EIA-310 RACK CAGE AND ACROSS THE TWO VERTICAL BACK RAILS WITH FOUR STAINLESS STEEL EIA MOUNTING SCREWS, TWO ON EACH SIDE. THE POWER STRIP SHALL NOT HINDER THE ACCESSIBILITY TO THE BACK OF ALL EXISTING ELECTRICAL EQUIPMENT. ALL POWER CORDS FOR PERMANENTLY FIELD INSTALLED ELECTRICAL EQUIPMENT SHALL BE PLUGGED INTO THE POWER STRIP.

 THE POWER STRIP, AT A MINIMUM, SHALL MEET THE FOLLOWING REQUIREMENTS:
 - A. IT SHALL HAVE A MAXIMUM RATING OF 15 A, 120 V (AC), 60 HZ.
 - B. IT SHALL HAVE A SURGE PROTECTION WITH UL 1449 CLAMPING LEVEL OF 400 V, AN IEEE LET-THROUGH VOLTAGE RATING OF LESS THAN 336 V, A SINGLE -PULSE ENERGY RATING OF 210 J AND EMI/RFI NOISE PROTECTION RATING OF 40 DB.
 - C. IT SHALL BE 2'' (H) x 19'' (W) x 2-4/5'' (D) MAXIMUM AND SHALL NOT WEIGH MORE THAN 4.5 LBS.
 - D. THE FRONT PLATE OF THE POWER STRIP SHALL HAVE FOUR CUT-OFF EIA MOUNTING SCREW HOLES, TWO ON EACH SIDE.
 - E. IT SHALL HAVE SIX REAR OUTLETS WITH 1-1/2'' MINIMUM APART CENTER TO CENTER. THE POWER CORD SHALL ENTER FROM THE REAR WITH A LENGTH OF 7 FEET MINIMUM. THE CLEARANCE BETWEEN THE POWER CORD ENTRANCE AND THE NEAREST OUTLET SHALL BE 3-3/5'' MINIMUM.
 - F. IT SHALL HAVE A 15 A CIRCUIT BREAKER AND AN INTERNALLY ILLUMINATED SWITCH TO CUT OFF POWER TO ALL OUTLETS. BOTH THE CIRCUIT BREAKER AND THE SWITCH SHALL BE FRONT MOUNTED.
3. **RC** EXISTING MAIN DISCONNECT INSIDE CMS INTERFACE PANEL. INSTALL TWO (2) - POLE, 30 A 120 V GANGED CIRCUIT BREAKERS AS MAIN DISCONNECT.

GENERAL NOTES:

1. PRIOR TO ANY WORK ON PG&E SERVICE CONDUCTORS, THE CONTRACTOR SHALL NOTIFY THE PG&E INSPECTOR.
2. THE CONTRACTOR SHALL VERIFY THROUGH TESTING EQUIPMENT THAT THE POWER FOR THE CMS SYSTEM HAS BEEN SHUT OFF BEFORE ANY WORK ON THE CMS SYSTEM.
3. EXISTING CMS DISCONNECT IS MOUNTED TYPICALLY 6' ABOVE FINISHED GRADE ON CMS STRUCTURE.
4. THE CONTRACTOR SHALL TEST THE CMS IN THE PRESENCE OF THE ENGINEER BEFORE AND AFTER THE MODULE REPLACEMENTS. THE CONTRACTOR SHALL PROVIDE TWO REPORTS PER CMS LOCATION ON THE WORKING STATUS OF EACH PIXEL MATRIX MODULE. THE REPORTS SHALL BE SUBMITTED TO THE ENGINEER, ONE BEFORE STARTING REPLACEMENT AND THE OTHER AFTER REPLACEMENT HAS BEEN COMPLETED AT EACH CMS LOCATION.
5. DURING THE TEST OF THE EXISTING XENON CMS SIGNS, THE CONTRACTOR SHALL SELECT AND LABEL THE EXISTING XENON PIXEL MATRIX MODULES FOR SALVAGE. SELECTED EXISTING XENON PIXEL MATRIX MODULES TO BE SALVAGED SHALL BE APPROVED BY THE ENGINEER IN THE FIELD.

LEGEND:

PMM PIXEL MATRIX MODULE

**MODIFY TRAFFIC OPERATION SYSTEM
 (INDEX, NOTES AND ABBREVIATIONS)**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 ELECTRICAL

REVISOR BY
 DATE

PARWIZ KHAZI
 PIERRE LASSALLE/MAHMOOD NOII

CALCULATED/DESIGNED BY
 CHECKED BY

FUNCTIONAL SUPERVISOR
 LAI HONG CHIU

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala,CC,Mrn, Sol,Son	24,80,84, 92,101,etc	Var	3	12

M. Now 3-04-10
 REGISTERED ELECTRICAL ENGINEER DATE

4-5-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 MAHMOOD NOII
 No. 13717
 Exp. 6-30-11
 ELECT

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

CMS AND CONTROLLER LOCATION DESCRIPTION	SOUTH OF CLOVERDALE Blvd	SOUTH OF REDWOOD PARKWAY	SOUTH OF REDWOOD PARKWAY	NORTH OF GOLDHILLON Rd	EAST OF E 5th St	SOUTH OF SR FRANCIS DRAKE	NORTH OF PACHECO Cr	SOUTH OF DELONG Ave
LOCATION No.	1	2	3	4	5	6	7	8
COUNTY	Son	SoI	SoI	SoI	SoI	Mrn	Mrn	Mrn
ROUTE	101	80	80	680	780	101	101	101
POST MILE	50.3	4.2	4.2	10.2	1.5	7.6	16.9	20.7
DIRECTION	NB	WB	EB	NB	EB	NB	NB	SB
LOCATION	A	A	A	A	A	A	A	A
CMS TYPE	X	X	X	X	X	X	X	X
CMS TYPE	L	L	L	L	L	L	L	L
HARNES REPLACEMENT	N	N	N	N	N	N	N	N
TYPE OF HARNES SHALL BE REPLACED	C	C	C	C	C	C	C	C
PROPOSED COMPLETE XENON CMS ON EXISTING FRAME	1	1	1	1	1	1	1	1
WORK DESCRIPTION, SEE E-1 FOR NOTES	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3

- X EXISTING XENON CMS PANELS
- L PROPOSED LED CMS PANELS
- A RIGHT SHOULDER/(RIGHT ETW)
- C NONE
- Y YES
- N NO

MODIFY TRAFFIC OPERATION SYSTEM

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.
 RELATIVE BORDER SCALE IS IN INCHES

FOR NOTES, ABBREVIATIONS &/OR LEGEND, SEE SHEET E-1

USERNAME => trrene
 DGN FILE => 41e650ua002.dgn

CU 04609

EA 1E6501

LAST REVISION DATE PLOTTED => 07-APR-2010
 01-19-10 TIME PLOTTED => 13:22

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 FUNCTIONAL SUPERVISOR
 LAI HONG CHIU
 CALCULATED/DESIGNED BY
 CHECKED BY
 PARWIZ KHAZI
 PIERRE LASSALLE/MAHMOOD NOII
 REVISED BY
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala, CC, Mrn, Sol, Son	24, 80, 84, 92, 101, etc	Var	4	12

M. Now 3-04-10
 REGISTERED ELECTRICAL ENGINEER DATE
 4-5-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MAHMOOD NOII
 No. 13717
 Exp 6-30-11
 ELECT
 STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

CMS AND CONTROLLER LOCATION DESCRIPTION	WEST OF LAFAYETTE BART STATION	EAST OF WILLOW Ave	BEFORE BAY BRIDGE HIGH RISE	WEST OF TOLL PLAZA	AT MARITIME St	EAST OF DAMBARTON BRIDGE	EAST OF THORNTON Ave	EAST OF INDUSTRIAL Blvd
LOCATION No.	9	10	11	12	13	14	15	16
COUNTY	CC	CC	Ala	Ala	Ala	Ala	Ala	Ala
ROUTE	24	80	80	80	80	84	84	92
POST MILE	6.0	11.2	1.6	1.6	3.0	1.7	4.0	5.4
DIRECTION	WB	EB	WB	EB	WB	WB	EB	EB
LOCATION	A	A	A	A	A	A	A	A
CMS TYPE	X	X	X	X	X	X	X	X
CMS TYPE	L	L	L	L	L	L	L	L
HARNESS REPLACEMENT	N	N	N	N	N	N	N	N
TYPE OF HARNESS SHALL BE REPLACED	C	C	C	C	C	C	C	C
PROPOSED COMPLETE XENON CMS ON EXISTING FRAME	1	1	1	1	1	1	1	1
WORK DESCRIPTION, SEE E-1 FOR NOTES	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3

- X EXISTING XENON CMS PANELS
- L PROPOSED LED CMS PANELS
- A RIGHT SHOULDER/(RIGHT ETW)
- C NONE
- Y YES
- N NO

MODIFY TRAFFIC OPERATION SYSTEM E-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 ELECTRICAL

REVISOR BY
 DATE

PARWIZ KHAZI
 PIERRE LASSALLE/MAHMOOD NOII

CALCULATED/DESIGNED BY
 CHECKED BY

FUNCTIONAL SUPERVISOR
 LAI HONG CHIU

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala,CC,Mrn, Sol, Son	24,80,84, 92,101, etc	Var	5	12

M. Noii 3-04-10
 REGISTERED ELECTRICAL ENGINEER DATE

4-5-10
 PLANS APPROVAL DATE

MAHMOOD NOII
 No. 13717
 Exp 6-30-11
 ELECT

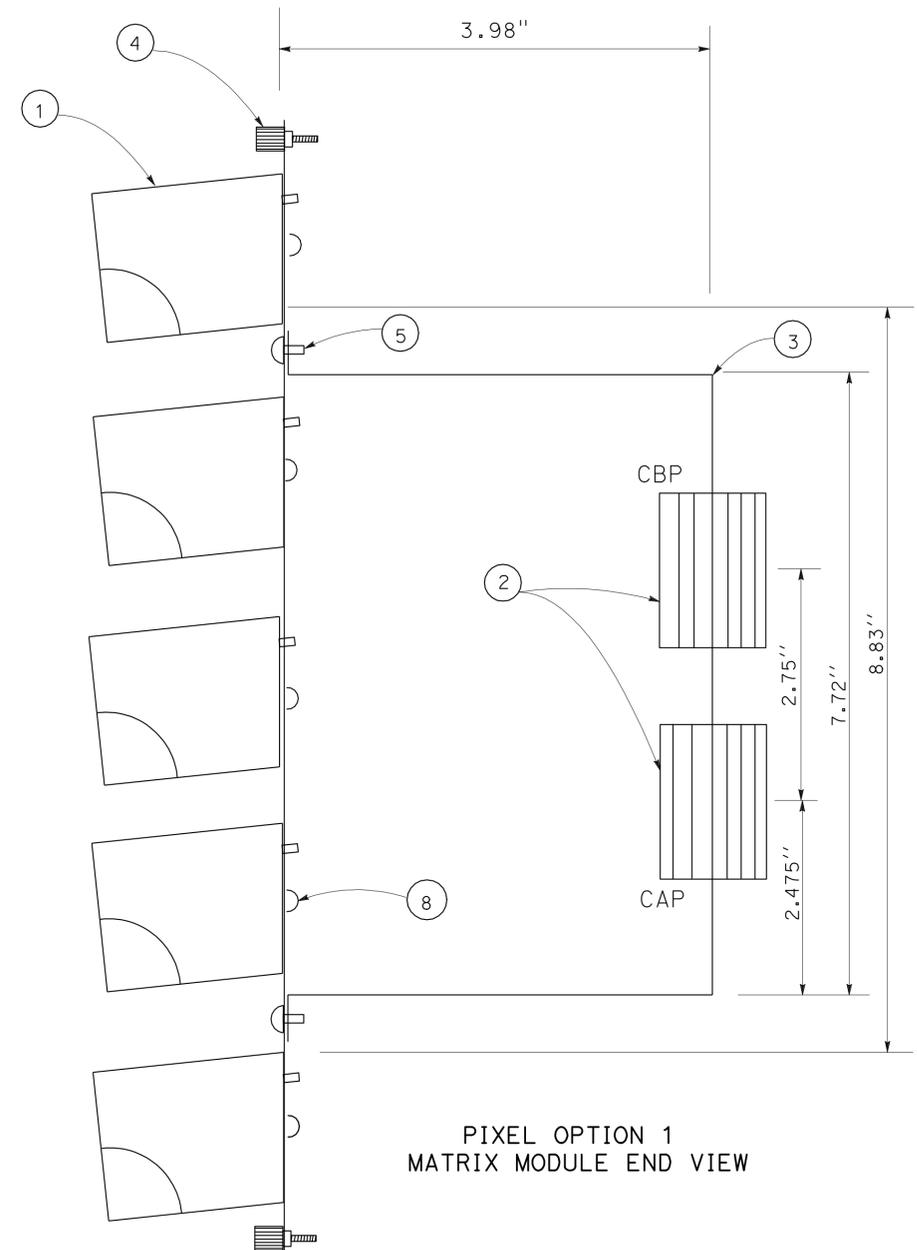
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

CMS AND CONTROLLER LOCATION DESCRIPTION	NORTH OF ASHLAND Ave	NORTH OF DIXON LANDING Rd	NORTH OF ALVARADO Blvd	NORTH OF INDUSTRIAL Blvd	NORTH OF WEST St	AT 5th St	AT WEST GRAND Ave
LOCATION No.	17	18	19	20	21	22	23
COUNTY	Ala	Ala	Ala	Ala	Ala	Ala	Ala
ROUTE	238	880	880	880	880	880	880
POST MILE	15.7	1.0	12.2	14.8	19.2	32.0	34.6
DIRECTION	NB	SB	SB	NB	NB	NB	NB
LOCATION	A	A	A	A	A	A	A
CMS TYPE	X	X	X	X	X	X	X
CMS TYPE	L	L	L	L	L	L	L
HARNES REPLACEMENT	N	N	N	N	N	N	N
TYPE OF HARNES SHALL BE REPLACED	C		C	C	C	C	C
PROPOSED COMPLETE XENON CMS ON EXISTING FRAME	1	1	1	1	1	1	1
WORK DESCRIPTION, SEE E-1 FOR NOTES	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3

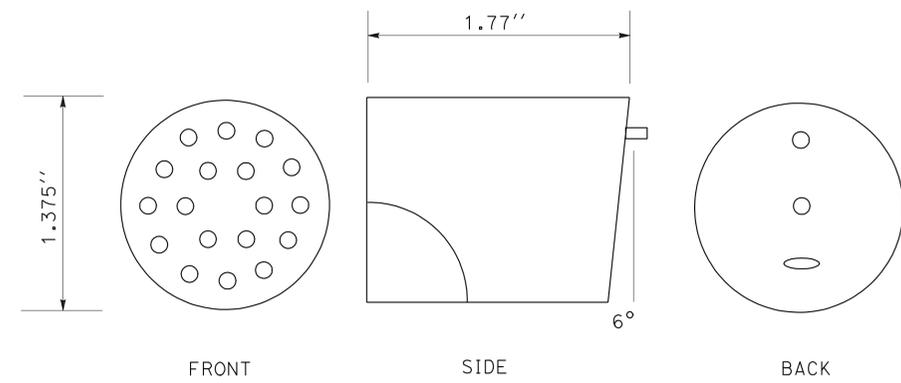
- X EXISTING XENON CMS PANELS
- L PROPOSED LED CMS PANELS
- A RIGHT SHOULDER/(RIGHT ETW)
- C NONE
- Y YES
- N NO

**MODIFY TRAFFIC OPERATION SYSTEM
 E-4**

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY. FOR NOTES, ABBREVIATIONS &/OR LEGEND, SEE SHEET E-1



PIXEL OPTION 1
MATRIX MODULE END VIEW



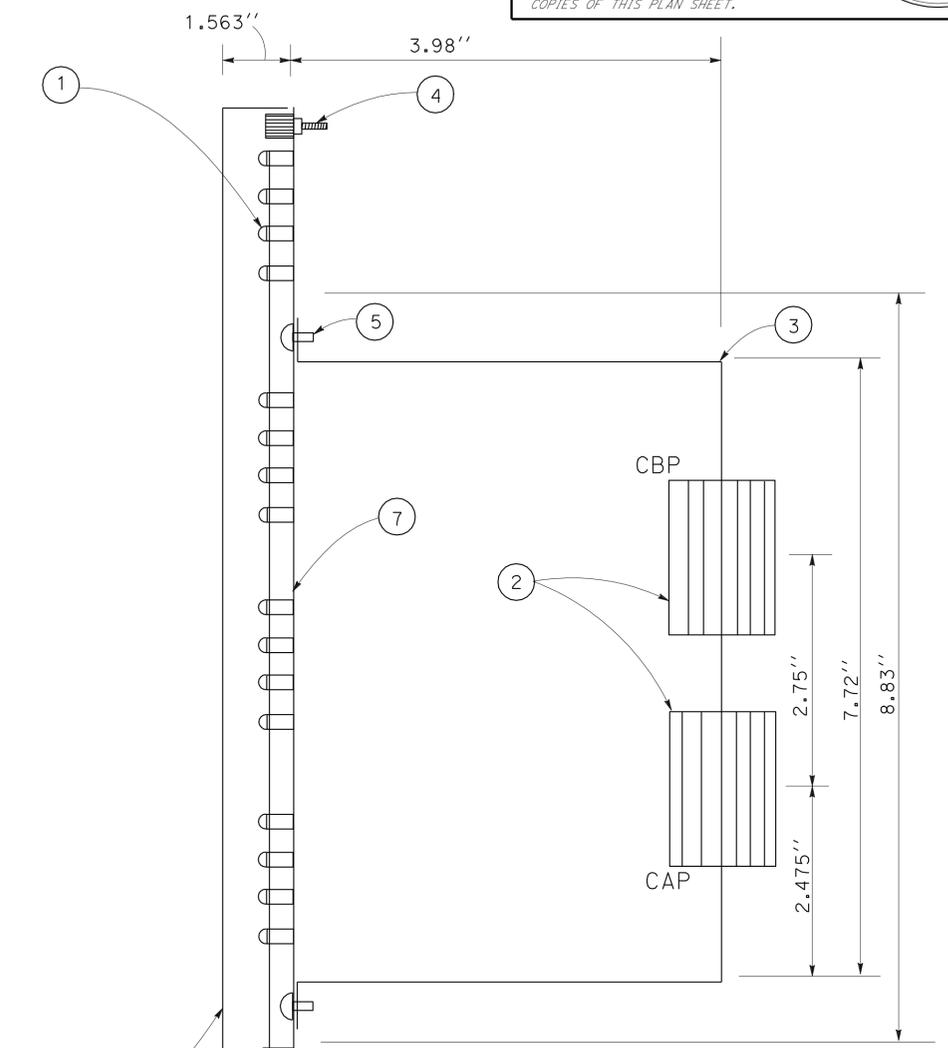
PIXEL OPTION 1
PMM (TYPE 1)

PROJECT NOTES:

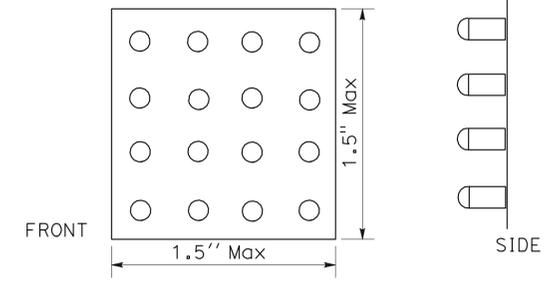
- (FOR THIS SHEET ONLY)
- LED "PIXEL" ASSEMBLY.
 - PLASTIC CABLE HARNESS MATING CONNECTOR PLUG.
 - 0.0625" ALUMINUM U SHAPED CONNECTOR MOUNTING BRACKET.
 - THUMB SCREW DEVICE (TSD No. 2)- TYPICAL (SOUTH Co No. 47-62-301-60 OR EQUAL)
 - UNIVERSAL HEAD ALUMINUM DRIVE RIVET-TYPICAL (SOUTH Co No. 38-104-04-13 OR EQUAL)
 - FORMED PLASTIC COVER ON LED PMM WITH 0.080" UV STABILIZED. THE COVER SHALL BE COATED OR TREATED FOR GLARE & SHALL NOT DISMINISH LIGHT OUTPUT BY MORE THAN 15%.
 - ALL PIXELS SHALL BE MOUNTED TO THE SAME PC BOARD
 - EACH PIXEL SHALL HAVE TWO 12.02" LEADS TO CONNECT TO THE CAP OR CBP AS PER SECTION 8-8

GENERAL NOTES:

- (FOR THIS SHEET ONLY)
- NOMINAL CENTER TO CENTER SPACING OF PIXEL: 2.75".
 - SEE CMS MODEL 500 SPECIFICATIONS, SECTION 8, FIGURES 8-8-5 AND 8-8-6 FOR ADDITIONAL DETAILS.
 - REMOVE EXISTING XENON PMM AND INSTALL 60 LED PMM (CONTRACTOR FURNISHED) PER SIGN PANEL. CONNECT EXISTING CABLE HARNESSES WITH CONNECTORS TO THE MATING CONNECTORS ON THE BACK OF PIXEL MATRIX MODULE UNIT. SECURE PMM WITH FOUR THUMB SCREWS TO MODULE MOUNTING FRAME.
 - RC EXISTING CMS SCREEN.



PIXEL OPTION 2
MATRIX MODULE END VIEW



PIXEL OPTION 2

PMM (TYPE 2)
MODIFY TRAFFIC OPERATION SYSTEM
(ELECTRICAL DETAILS)
(CMS RETROFIT MODEL 500 LED PMM
DIMENSIONS AND SHAPE)
 NO SCALE **E-5**

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

FOR NOTES, ABBREVIATIONS &/OR LEGEND, SEE SHEET E-1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala, CC, Mrn, Sol, Son	24, 80, 84, 92, 101, etc	Var	7	12

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

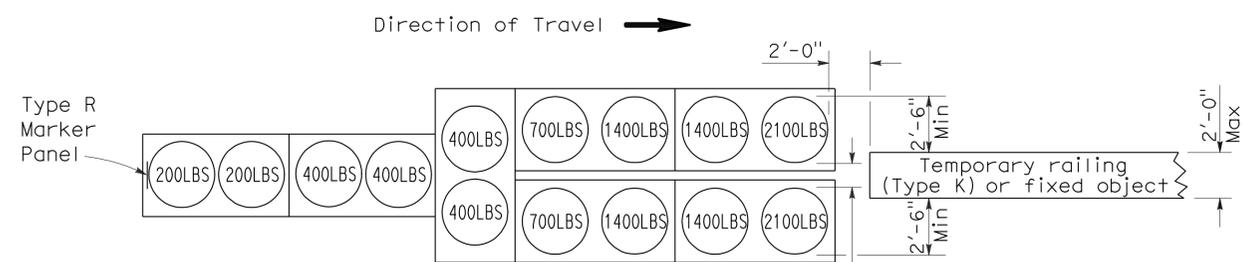
June 6, 2008
PLANS APPROVAL DATE

Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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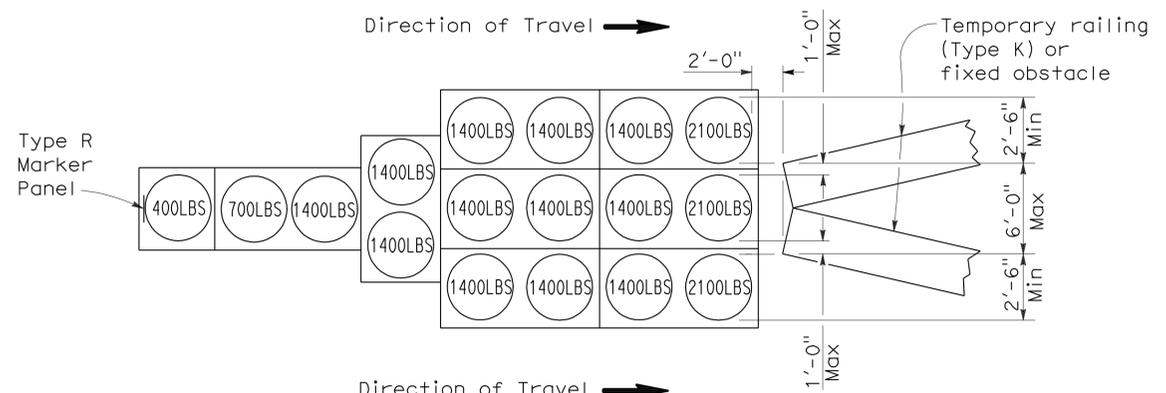
To accompany plans dated 4-5-10

2006 REVISED STANDARD PLAN RSP T1A



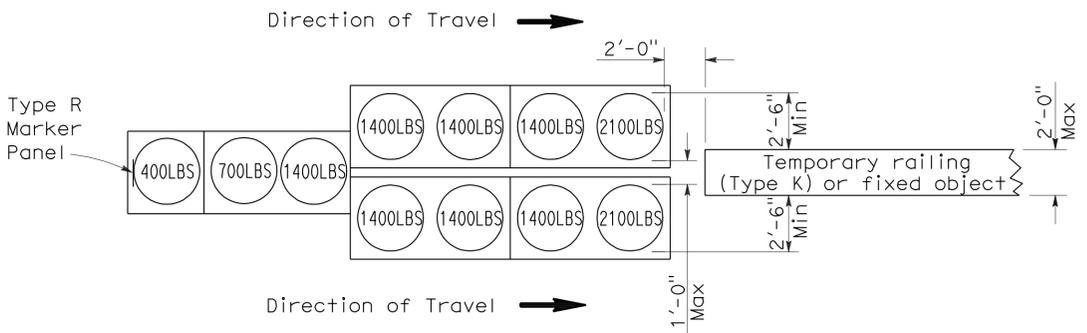
ARRAY 'TU14'

Approach speed 45 mph or more



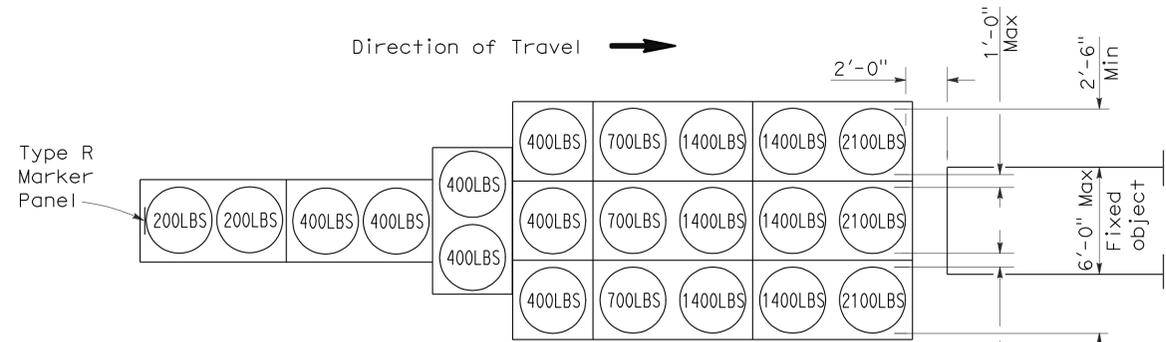
ARRAY 'TU17'

Approach speed less than 45 mph



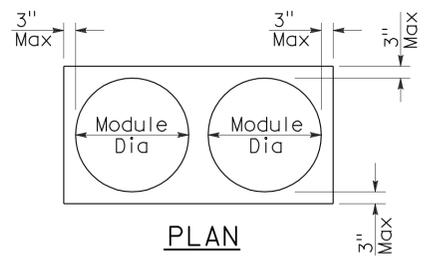
ARRAY 'TU11'

Approach speed less than 45 mph

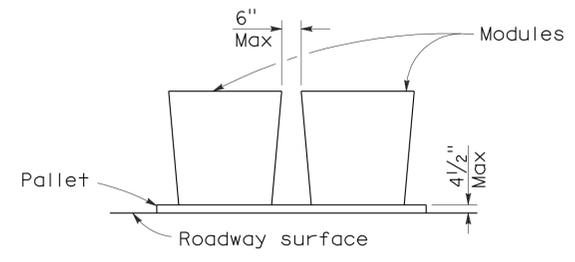


ARRAY 'TU21'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the top of Type R marker panel 1" below the module lid.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,
SAND FILLED
(UNIDIRECTIONAL)**

NO SCALE

RSP T1A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1A
DATED MAY 1, 2006 - PAGE 211 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala, CC, Mrn, Sol, Son	24, 80, 84, 92, 101, etc	Var	8	12

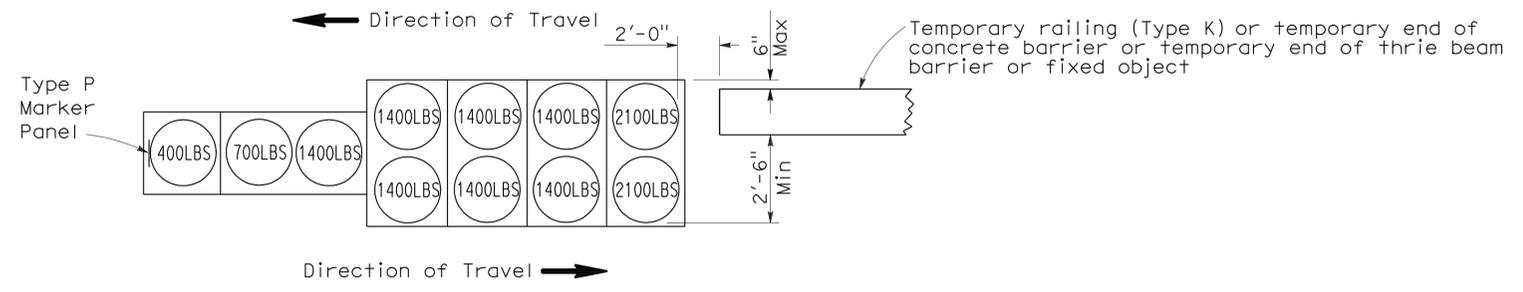
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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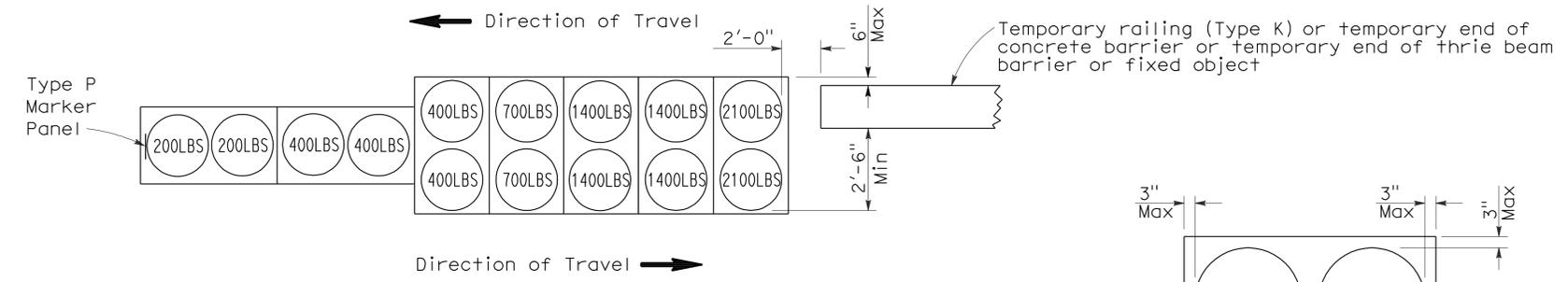
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 4-5-10



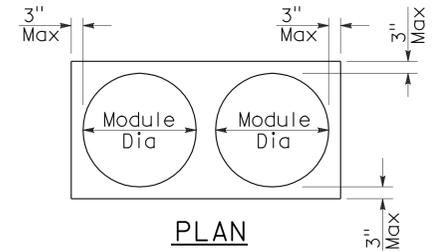
ARRAY 'TB11'

Approach speed less than 45 mph

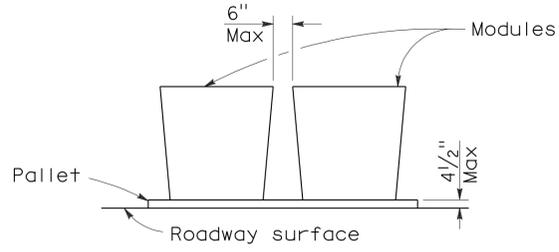


ARRAY 'TB14'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the Type P marker panel so that the bottom of the panel rests upon the pallet.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,
SAND FILLED
(BIDIRECTIONAL)**

NO SCALE

RSP T1B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1B
DATED MAY 1, 2006 - PAGE 212 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1B

2006 REVISED STANDARD PLAN RSP T1B

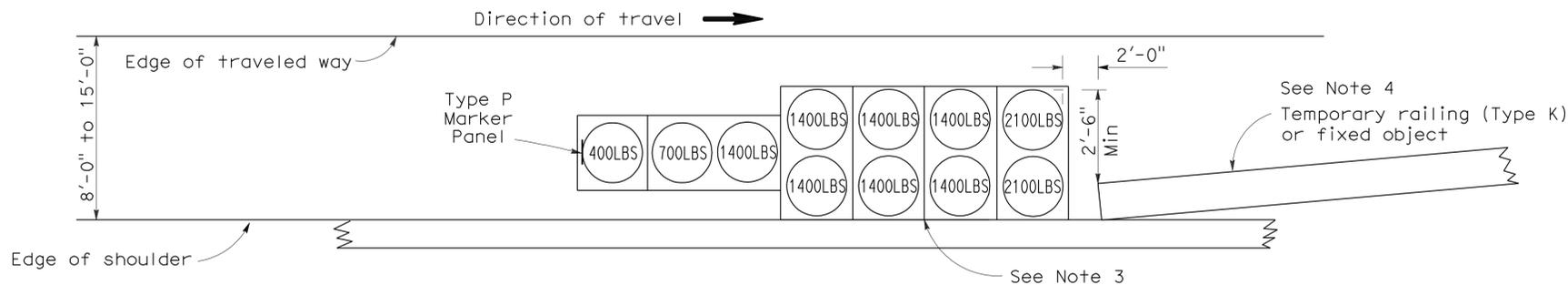
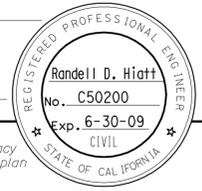
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala, CC, Mrn, Sol, Son	24, 80, 84, 92, 101, etc	Var	9	12

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

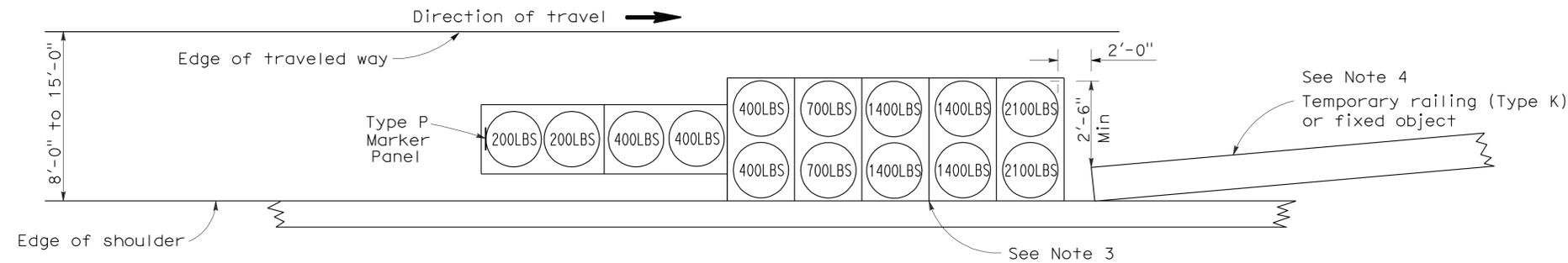
June 6, 2008
PLANS APPROVAL DATE

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To accompany plans dated 4-5-10



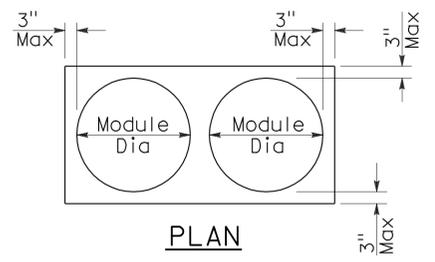
ARRAY 'TS11'
Approach speed less than 45 mph
See Note 9



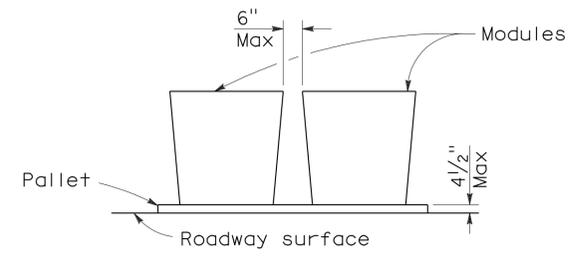
ARRAY 'TS14'
Approach speed 45 mph or more
See Note 9

NOTES:

- (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
- All sand weights are nominal.
- The temporary crash cushion arrays shown on this plan shall be used only in locations where there will be traffic on one side of the temporary crash cushion array.
- If the fixed object or approach end of the temporary railing is less than 15'-0" from the edge of traveled way, a temporary crash cushion is required in a construction or work zone.
- Temporary crash cushion arrays shall not encroach on the traveled way.
- Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
- Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
- Refer to Standard Plan A73B for marker details.
- For shoulder widths less than 8'-0", appropriate approved crash cushion protection, other than sand filled modules, shall be provided at fixed objects and at approach ends of temporary railing. The specific type of crash cushion shall be as shown on the project plans or as specified in the Special Provisions, or if not shown on the project plans or specified in the Special Provisions, shall be as approved by the Engineer.
- Approach speeds indicated conform to NCHRP 350 Report criteria.
- Use of pallets is optional.



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 11

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**TEMPORARY CRASH CUSHION,
SAND FILLED
(SHOULDER INSTALLATIONS)**

NO SCALE

RSP T2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T2
DATED MAY 1, 2006 - PAGE 213 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

ELECTROLIERS

STANDARD TYPES	Symbol	Description
15, 15D		High mast light pole
15 STRUCTURE		Double Arm lighting standard
21, 21D STRUCTURE		Existing electrolier
30		Electrolier foundation (Future installation)
31		
32		
35		
36-20A		

NOTES:

- Luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31, 32, 35 and 36-20A Standards, unless otherwise specified. Luminaires shall be 200 W HPS when installed on other type standards or poles, unless otherwise specified.
- Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.
- Variations noted adjacent to symbol on project plans.

- Electrolier (see project notes or project plans)
- Luminaire on wood pole

STANDARD NOTES:

- AB** Abandon. If applied to conduit, remove conductors.
- BC** Install pull box in existing conduit run.
- BP** Pedestrian barricade, type as indicated on plan.
- CB** Install conduit into existing pull box.
- CC** Connect new and existing conduit. Remove existing conductors and install conductors as indicated.
- CF** Conduit to remain for future use. Remove conductors. Install pull wire or rope.
- DH** Detector handhole.
- FA** Foundation to be abandoned.
- IS** Install sign on signal mast arm.
- NS** No slip base on standard.
- PEC** Photoelectric control.
- PEU** Photoelectric unit.
- RC** Equipment or material to be removed and become the property of the Contractor.
- RE** Remove electrolier, fuses and ballast. Tape ends of conductors.
- RL** Relocate equipment.
- RR** Remove and reuse equipment.
- RS** Remove and salvage equipment.
- SC** Splice new to existing conductors.
- SD** Service disconnect.
- SF** Standard to remain for future use. Remove luminaire, pole conductors, fuses and ballast.
- TSP** Telephone service point.

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

PROPOSED EXISTING

BBS	bbs	Battery backup system
BC	bc	Bolt circle
C	C	Conduit
CCTV	cctv	Closed circuit television
CKT	ckt	Circuit
CMS	cms	Changeable message sign
DLC	dlc	Loop detector lead-in cable
EMS	ems	Extinguishable message sign
EVC	evc	Emergency vehicle cable
EVD	evd	Emergency vehicle detector
FB	fb	Flashing beacon
FBCA	fbca	Flashing beacon control assembly
FBS	fbs	Flashing beacon with slip base
FO	fo	Fiber optic
G	G	Ground (Equipment Grounding Conductor)
GFCI	GFCI	Ground fault circuit interrupt
HAR	har	Highway advisory radio
HEX	hex	Hexagonal
HPS	hps	High pressure sodium
IISNS	iisns	Internally illuminated street name sign
ISL	isl	Induction sign lighting
LED	led	Light emitting diode
LMA	lma	Luminaire mast arm
LPS	lps	Low pressure sodium
LTG	ltg	Lighting
LUM	lum	Luminaire
MAT	mat	Mast arm mounting vehicle signal faces, top attachment
MAS	mas	Mast arm mounting vehicle signal faces, side attachment
MAS-4A	mas-4A	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-4B	mas-4B	
MAS-4C	mas-4C	
MAS-5A	mas-5A	Mast arm mounting vehicle signal faces, side attachment - 5 signal section
MAS-5B	mas-5B	
MC	mc	Mercury contactor
M/M	m/m	Multiple to multiple transformer
MT	mt	Conduit with pull wire or rope only
MTG	mtg	Mounting
	mv	Mercury vapor lighting fixture
N	N	Neutral (Grounded Conductor)
NC	NC	Normally closed
NO	NO	Normally open
PB	pb	Pull box
PEC	pec	Photoelectric control (Type I, II, III, IV or V as shown)
PED	ped	Pedestrian
PEU	peu	Photoelectric unit
PPB	ppb	Pedestrian push button
RL		Relocated equipment
RM	rm	Ramp metering
SB	sb	Slip base
SIC	sic	Signal interconnect cable
SIG	sig	Signal
SMA	sma	Signal mast arm
SNS	sns	Street name sign
SP	sp	Service point
TDC	tdc	Telephone demarcation cabinet
TMS	tms	Traffic monitoring station
TOS	tos	Traffic Operations System
VEH	veh	Vehicle
XFMR	xfmr	Transformer
COMM	comm	Communication
RWIS	rwis	Roadway weather information system

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala, CC, Mrn, Sol, Son	24, 80, 84, 92, 101, etc	Var	10	12

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

Jeffery G. McRae
REGISTERED PROFESSIONAL ENGINEER
No. E14512
Exp. 6-30-08
ELECTRICAL
STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 4-5-10

SOFFIT AND WALL MOUNTED LUMINAIRES

- Pendant, 70 W HPS unless otherwise specified.
- Flush, 70 W HPS unless otherwise specified.
- Wall surface, 70 W HPS unless otherwise specified.
- Existing soffit or wall luminaire to remain unmodified.
- Existing soffit or wall luminaire to be modified as specified.

NOTE:

Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

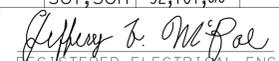
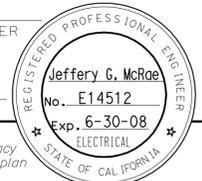
NO SCALE

RSP ES-1A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1A DATED MAY 1, 2006 - PAGE 400 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1A

2006 REVISED STANDARD PLAN RSP ES-1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala, CC, Mrn, Sol, Son	24, 80, 84, 92, 101, etc	Var	11	12


 REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE

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CONDUIT

PROPOSED	EXISTING	
		Lighting Conduit, unless otherwise indicated or noted
		Traffic signal conduit
		Communication conduit
		Telephone conduit
		Fire alarm conduit
		Fiber optic conduit
		Conduit termination 
		Conduit riser in/on structure or service pole

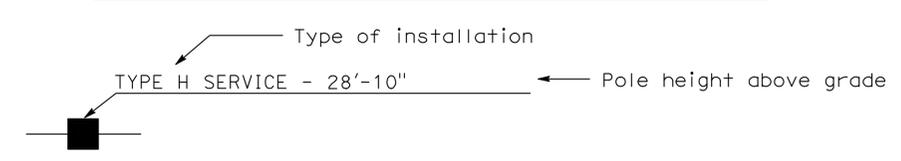
SIGNAL EQUIPMENT

PROPOSED	EXISTING	
		Pedestrian signal face
		Pedestrian push button post
		Pedestrian barricade
		Vehicle signal face (with backplate, 3-Section: red, yellow and green)
		Vehicle signal face with angle visors
		Modifications of basic symbols: "L" indicates all non-arrow sections lowered "LG" indicates lowered green section only "PV" indicates 12" programmed visibility sections "8" indicates all 8" sections (only when specified)
		Type 15TS and Vehicle signal face
		Vehicle signal face with red, yellow and green left arrow sections
		Vehicle signal face with red and yellow sections and up green arrow
		Vehicle signal face (5 Section) with red, yellow and green sections and yellow and green right arrows
		Type 1 Standard and attached vehicle signal faces
		Standard with signal mast arm only and attached vehicle signal faces and internally illuminated street name sign
		Type 33 Standard, Left-turn vehicle signal face and sign
		Standard with luminaire and signal mast arms and attached vehicle signal faces
		Cantilever flashing beacon Type 9 Frame, with a sign unless otherwise specified or indicated
		Type 15-FBS Standard with two vehicle signal face sections with lens, backplate and visor with a sign
		Flashing beacon. One vehicle signal face section with lens, backplate and visor. "R" indicates red indication, "Y" indicates yellow indication
		Controller assembly. Door indicates front of cabinet

SERVICE EQUIPMENT

PROPOSED	EXISTING	
		Overhead lines
		Wood pole "U" indicates utility owned
		Pole guy with anchor
		Utility transformer - ground mounted
		Service equipment enclosure type
		Service equipment enclosure door indicates front of enclosure
		Telephone demarcation cabinet

POLE-MOUNTED SERVICE DESIGNATION



ILLUMINATED OVERHEAD SIGN

PROPOSED	EXISTING	
		Overhead sign - Single post
		Overhead sign - Two post
		Overhead sign - Mounted on structure
		Overhead sign with electrolier

SIGNAL EQUIPMENT Cont

PROPOSED	EXISTING	
		Guard post
		Type 1 Standard with "Meter On" sign
		Emergency Vehicle detector

NOTES:

- All signal sections shall be 12" unless shown otherwise.
- Signal heads shall be provided with backplates unless shown otherwise.
- Signal indication shall be LED.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SYMBOLS AND ABBREVIATIONS)**
 NO SCALE

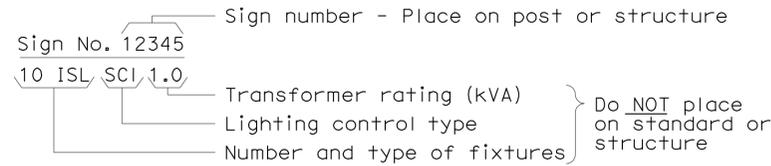
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

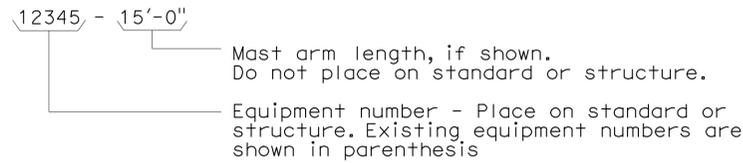
2006 REVISED STANDARD PLAN RSP ES-1B

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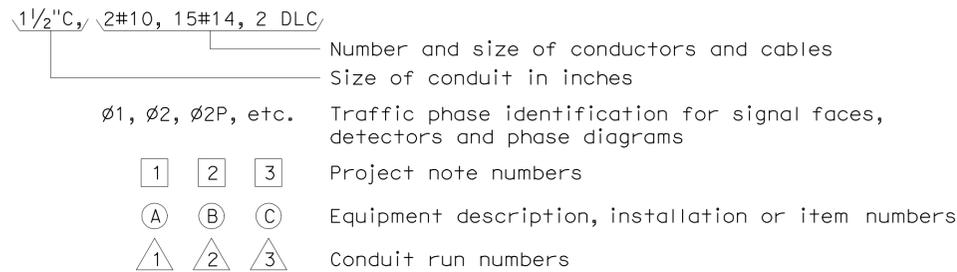
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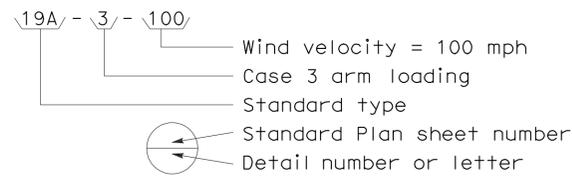
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



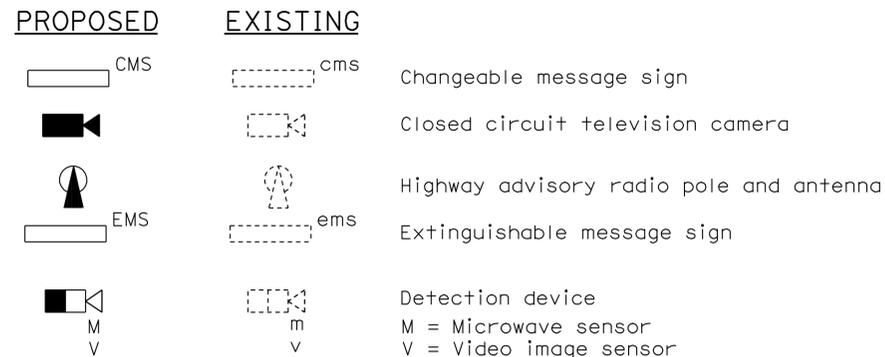
CONDUIT AND CONDUCTOR IDENTIFICATION:



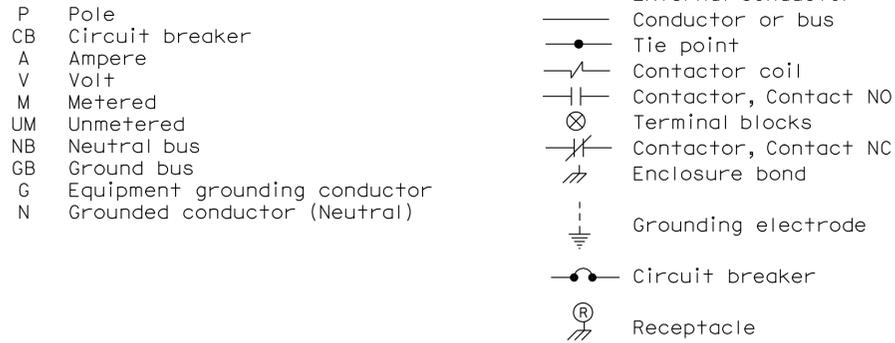
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



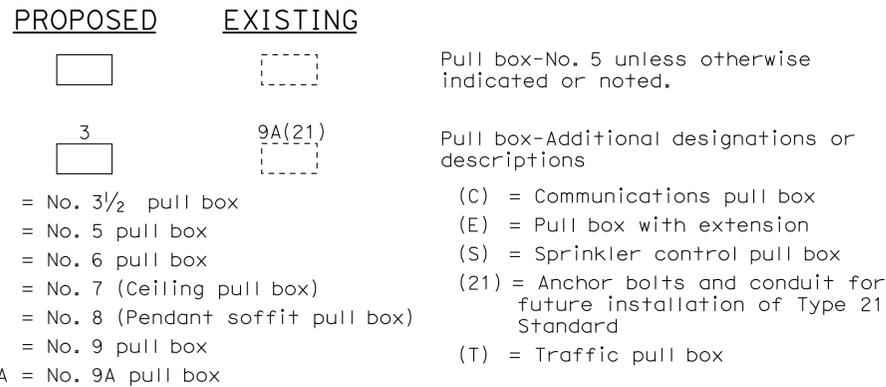
MISCELLANEOUS EQUIPMENT



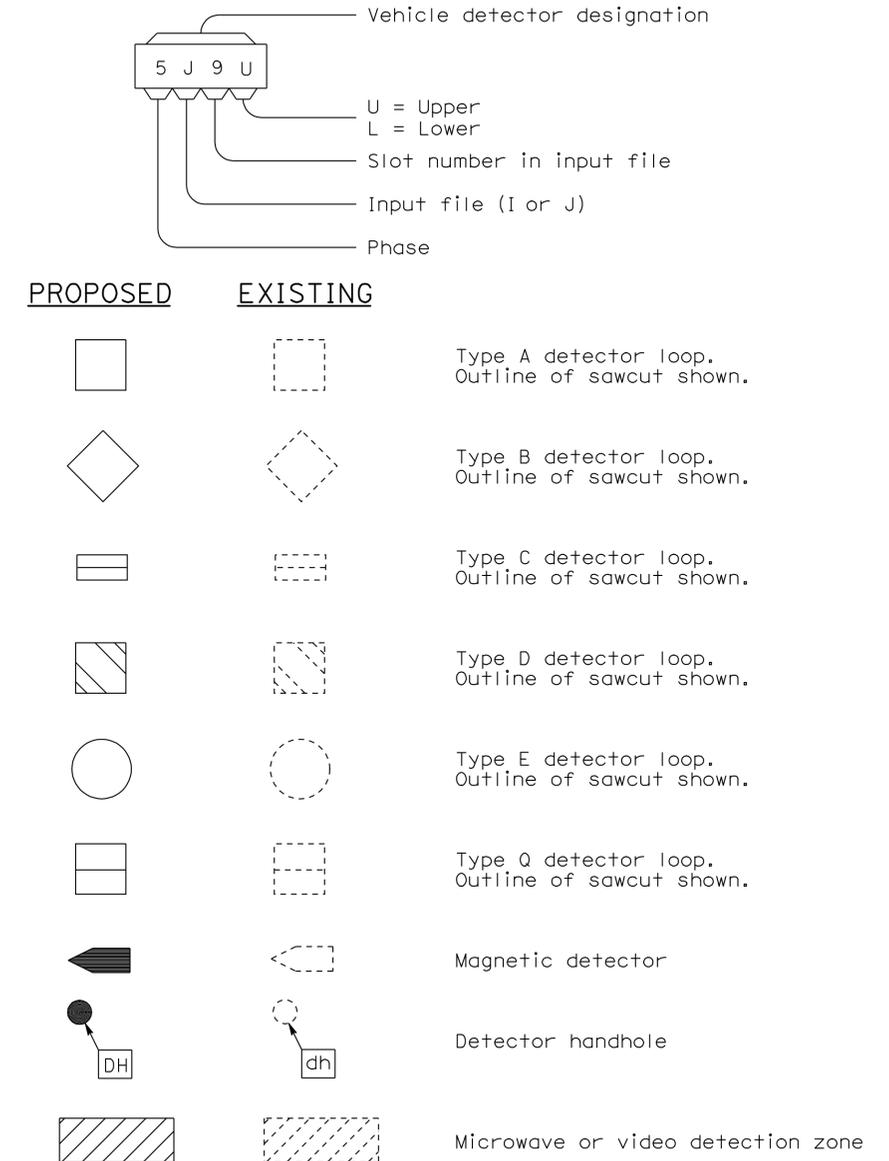
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1C
 DATED MAY 1, 2006 - PAGE 402 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1C

2006 REVISED STANDARD PLAN RSP ES-1C